



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,210	10/11/2001	Victor F. Petrenko	393551	1402

7590 11/25/2003

Thomas Swenson
Lathrop & Gage L.C.
Suite 302
4845 Pearl East Circle
Boulder, CO 80301

EXAMINER

VAN, QUANG T

ART UNIT	PAPER NUMBER
----------	--------------

3742

DATE MAILED: 11/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,210

Applicant(s)

PETRENKO, VICTOR F.

Examiner

Quang T Van

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, 13-15 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 4, 10-12, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

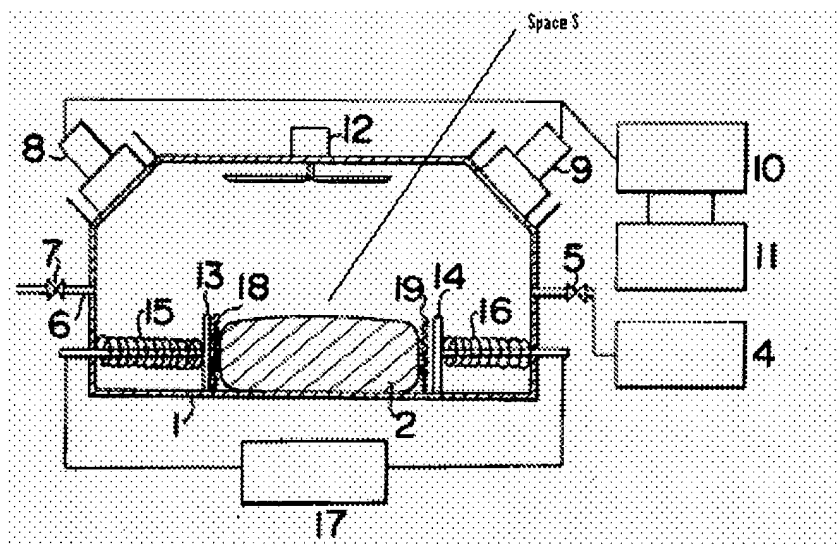
Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-6, 13, 15, 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue et al (US 4,054,672). Inoue et al discloses a device for preparation of frozen and defrosted foods comprising a first electrode (13); a second electrode (14), the first electrode (13) and the second electrode (14) defining an interelectrode space (S, figure below) between the first electrode and the second electrode, the first electrode and the second electrode defining an interelectrode distance (S) that separates the first electrode and the second electrode; an AC power source (17) for providing an AC voltage across the first and second electrodes having a frequency greater than 1000Hz (col. 6, lines 56-57). With regard to claims 18-20, the frozen food



is covering with ice; therefore, it is inherently that a resistive AC current in the interfacial ice when an alternating electric field is proximate to the ice interface.

3. Claims 1, and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Koch (US 4,974,503). Kouch discloses an apparatus for irradiating food product comprising a first electrode (5); a second electrode (6), the first electrode (5) and the second electrode (6) defining an interelectrode space between the first electrode and the second electrode, the first electrode (5) and the second electrode (6) defining an interelectrode distance (figure 2) that separates the first electrode and the second electrode; an AC power source (8) for providing an AC voltage across the first and second electrodes having a frequency greater than 1000Hz (col. 4, lines 22-23).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Inoue et al (US 4,054,672) in view of Polny, Jr. (US 5,630,360). Inoue discloses substantially all features of the claimed invention except the AC power source provides an AC voltage in a range about from 10 volts to 500 volts. Polny discloses an AC power source provides an AC voltage in a range about from 10 volts to 500 volts (col. 23, lines 45-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Inoue an AC power source provides an AC voltage in a

range about from 10 volts to 500 volts as taught by Polny in order to provide sufficient power for deicing system.

6. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Inoue et al (US 4,054,672) in view of Weinstein (US 6,239,601). Inoue discloses substantially all features of the claimed invention except the interelectrode distance has a value in a range of about from 50 μ m to 500 μ m. Weinstein discloses an interelectrode distance has a value in a range of about from 50 μ m to 500 μ m (col. 4, lines 10-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Inoue an interelectrode distance has a value in a range of about from 50 μ m to 500 μ m as taught by Weinstein in order to control the applying voltage. With regard to claims 8 and 9, It would have been obvious to one having ordinary skill in the art to modify the interelectrode distance has a value less than 50 μ m or has a value greater than 500 μ m. Doing so would control the applying voltage, since the less value for the less applying voltage and the more value for the greater applying voltage.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Inoue et al (US 4,054,672). Inoue discloses substantially all features of the claimed invention including a conductive grid (18, 19). However, Inoue is silent about conductive grid makes by metal strips. It would have been obvious to one having ordinary skill in the art to make the conductive grid by metal strips. Doing so would improve the conductive between the conductive grid and the frozen object.

8. Claims 4, 10-12, and 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the insulator comprises a nonconductive rubber windshield wiper blade as recited in claim 4; the first electrode and second electrode comprise a layer of conductive glass as recited in claims 10-11; the first electrode comprising a transparent conductive metal oxide as recited in claim 12; the first and second electrodes are interdigitated as recited in claim 16; and the second electrode comprises a conductive rubber windshield wiper blade as recited in claim 17.

Response to Amendment

10. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T Van whose telephone number is 703-306-9162. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sang Paik can be reached on 703-308-1147. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9302.

Application/Control Number: 09/976,210
Art Unit: 3742

Page 6

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.



QV
November 19, 2003



Quang T Van
Primary Examiner
Art Unit 3742